



Afterschool Adventure!

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Professional Development Extension



More About Math

Animal Assistants

Background for Leaders

This unit focuses on developing spatial sense with 4-5-year-old children. Throughout this adventure children will assume the role of Animal Assistants and use their spatial reasoning skills to save the day by using position, location, and direction vocabulary to guide the animals out of trouble!

Spatial Sense

Spatial sense is the understanding of the **positions, directions, and locations of objects** and the relationships between those objects. The skills associated with spatial sense enable children to read maps or graphs and complete mazes or puzzles, all of which lay the foundation for more advanced geometry and spatial reasoning skills. Children's understanding of space and location is as important as utilizing the proper vocabulary throughout these activities.

In several activities children will use directional words and clues to determine the location of an object. Begin by giving children only one directional word at a time and build on this skill until they are following two directions in a row, such as **“go to the left one space and up two spaces”**. Vocabulary used to give directions are **up, down, right** and **left** and are usually accompanied by a number of spaces to move in that direction..

Children will use relative position in mapping activities in order to determine the location of objects. This means that the location of one object can be found based upon its relationship (position in relation to) another object. For example, Cat is located above Peg. This skill can be built upon to include two position words such as; **the fish can be located next to the purple seaweed and above the yellow clam**. Vocabulary words that are often used in identifying the relative position of objects are **under, over, next to, on top of, behind, in front of, between, closer** or **closest to, and farther** or **farthest away from**.

Spatial sense includes understanding how pieces fit together. This means that when pieces are missing from a puzzle, children can find the right one and complete the puzzle. Or, when children are faced with a maze, they will be able to navigate it from start to finish. In some of these activities, children will need to find the right piece to complete a path. This will require them to know what kind of piece they are looking for (for example, straight or curved), and in what direction the piece needs to be placed. In some cases they may need to rotate, turn, or even flip the piece over. For example, in the game **Meerkat Jubilee**, children will need to place the tunnel pieces vertically or horizontally. Children at this age will likely not know these words, but you can use them by saying, **“Should we put the tunnel vertically, going up and down, or horizontally, going left to right?”** This will help them gain familiarity with these terms, while not requiring that they use them.



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